REMARKS

Reconsideration and allowance in view of the foregoing amendments and the following remarks are respectfully requested.

Claims 12 and 16-20 are pending in the application.

The examiner objected to claims 12 and 20. Applicant has amended claims 12 and 20 to change the specified occurrence of the term "wherein" to –comprising—as suggested by the examiner. Applicant thus requests withdrawal of the objection.

The examiner rejected claims 12, 16, 17 and 20 under 35 USC § 103(a) as being unpatentable over Das et al., in view of Weissman et al. (US 6,330,885) and Corl et al. (US 6,767,327); and claims 18 and 19 under 35 USC § 103(a) as being unpatentable over Das et al, in view of Weissman et al., Corl et al. and Overall et al. Applicant respectfully traverses these rejections for at least the following reasons.

Applicant amended claims 12, 19 and 20 to delete the phrase "or attached thereto." Applicant also amended claims 12, 19 and 20 to clarify the intended meaning. For example, claims 12 and 20 each now recites that the "substrate is exposed such that the pressure to be monitored acts directly on it . . ." and to recite "an external receiver" to be sure the language is clear. These amendments are fully supported by the specification. For example, the examiners attention is directed to page 5, lines 24-27 and page 6, lines 2-3, respectively.

There are a number of significant distinctions in the claimed invention over Das. Firstly, the present invention, as claimed, exposes the substrate such that the pressure to be monitored acts directly on it. Thus, the substrate would be exposed to, and in contact with the inside of the body, for example the blood within a blood vessel. This is different compared to the arrangement in Das since Das discloses a substrate which is encapsulated within a housing made up of an aluminum base and a plexiglass diaphragm. In Das, the plexiglass diaphragm is in direct contact with the pressure to be monitored, and deforms in response to that pressure.

The plexiglass diaphragm includes two fingers which push against the top surface of the substrate in order to transfer a force at those two points onto the substrate.

For the substrate to be exposed directly to the pressure, the plexiglass diaphragm would have to be removed. There is nothing in Das to suggest that the plexiglass diaphragm could be removed. In fact, a person or ordinary skill would want to keep the fluids within a body away from the substrate because he would be aware that fluids in contact with the surface of a surface acoustic wave device significantly damps the surface acoustic wave, which is undesirable in this application. For this reason, we submit that it is not obvious to have the pressure acting directly on the substrate and that the invention as claimed is not obvious.

Allowing the substrate to be exposed directly to the pressure allows the device to be much thinner, making it much more appropriate to implant into a blood vessel without causing a constriction. This is a valuable practical advantage over Das.

Secondly, the present invention is distinguished over Das by the fact that the substrate closes a sealed chamber to form a transducer body. There is no suggestion in Das that the region beneath the substrate is sealed with respect to the region above the substrate. In fact, there is no need to have a seal around the substrate because the device is not measuring the pressure difference between the top and bottom of the substrate, but the force applied by the plexiglass diaphragm.

Thirdly, the present invention is further distinguished over Das by the fact that an externally supplied radio frequency signal drives the device, by the fact that the receiver for receiving the return signal is an external receiver, and by the presence of an antenna which permits both of the above characteristics. This means that the present invention does not require an internal power supply within the device. All of the power for operation is supplied to the device externally in the form of the RF signal. This avoids the need for a battery and other electronic circuitry to be included in the implanted device, thereby allowing the implanted

device to be much smaller and free from potentially toxic and body incompatible materials.

It should be appreciated that the device disclosed in Das contains a battery within the implanted device as well as electronic components to operate the resonator. The device in Das is permanently powered so that the resonator is continuously directing signals to the transducer, regardless of whether any measurements of pressure are being carried out. This means that Das does not have an antenna for receiving signals from outside of the body. It does not require incoming signals because it is switched on all of the time. Thus, it will be appreciated that the operation of Das is completely different to that of the claimed invention.

The Examiner suggests that all of the features are disclosed by Das in combination with Weissman and Corl. However, looking again at Weissman, we maintain our view that a person of ordinary skill at the time of the invention would not have combined the teaching of Weissman with Das because Weissman is not measuring pressure but the build up of accretions on the surface of a surface acoustic wave device. It does not disclose a sealed chamber to form a transducer body. It does not disclose the measurement of pressure on the substrate.

A person of ordinary skill in the art would not have combined Das and Weissman. The person of ordinary skill starting with Das might be looking to identify other pressure sensors which can be implanted into the body, but we do not see any reason why he would have looked to a device which measures restinosis. Therefore, not only would it not have been obvious to combine Das and Weissman at the time of the current invention, but Weissman does not disclose all of the features of the present invention which are missing from Das.

With regard to Corl, a person of ordinary skill would have been unlikely to adopt any of the disclosed features. This is primarily because Corl doesn't disclose an implantable pressure detector, but one which is located in a catheter tip which is temporarily inserted into the body for a very short period of time. The sensor in Corl is a conventional strain gauge type sensor. Corl does not disclose all of the features of the present invention

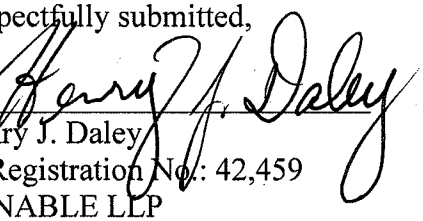
which are missing from Das. It does not disclose a device which is implantable. It does not disclose a piezoelectric substrate that closes a sealed chamber. It does not give any reason why you would allow the body to be in direct contact with the substrate, in view of the fact that fluids will damp the surface acoustic wave signals passing over the surface of a piezoelectric substrate. It also discloses no antenna since it is a wired system, and does not require the application of radio frequency signals, or an external receiver for receiving the signal from the antenna. Thus, there is little that one would have taken from Corl which one might have applied to the present invention.

Since these distinctions apply to all pending claims 12 and 16-20, Applicant respectfully submits that they are all in condition for allowance and requests that the rejections be withdrawn.

Applicant has addressed all of the objections and rejections and respectfully submits that the application is now in condition for allowance. Applicant's representative encourages the examiner to contact him at the below-noted telephone number if it may help expedite the prosecution of this case.

Dated: November 12, 2010

Respectfully submitted,

By 

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